Teaching Innovation

Written by Mike Honda Wednesday, 25 April 2007 19:00

The National Academies report <u>Rising Above the Gathering Storm</u> found that the United States "must prepare with great urgency to preserve its strategic and economic security." To do this, the report suggests that "the United States must compete by optimizing its knowledge-based resources, particularly in science and technology, and by sustaining the most fertile environment for new and revitalized industries and the well-paying jobs they bring." To address this problem, this week the House passed the first pieces of the "

Innovation Agenda

," which I helped Speaker Pelosi develop and have written about in past newsletters. First up were two bills which I was proud to cosponsor,

10,000 Teachers, 10 Million Minds Science and Math Scholarship Act

, and the

Sowing the Seeds Through Science and Engineering Act

, which include provisions from my own bill, the

Innovations for our Nation's Vital Educational Needs for Technology (INVENT) Act

. As a representative from Silicon Valley, the home of technological innovation in America, I am keenly aware of how innovation is the driving force behind our nation's economy. I agree with the

Gathering Storm

report that we must do everything we can to remain the world leader in innovation in order to remain competitiveness in the global marketplace. One way we can do this is to expand our nation's commitment to long-term basic research, which is the "seed corn" for many of the technological innovations that our economy will be based upon in the future. H.R. 363 will do just that, authorizing funding for agencies that support basic research, supporting outstanding researchers in the early stages of their careers, establishing an innovation award, and setting up coordination mechanisms to identify and prioritize research infrastructure needs. Another important component is improving the national corps of math and science teachers, both by recruiting new teachers and by developing and supporting current ones. H.R. 362 does this through grants to build model programs for recruiting science, technology, engineering, or mathematics students into teaching; sustained, content-oriented professional development for in-service teachers, and expanding the

STEM Talent Expansion Program

to enhance undergraduate education of the future STEM workforce. There is one thread that runs through both bills that I particularly support, something I call "Teaching Innovation." H.R. 363 authorizes the National Science Foundation to support research on the process of innovation and the teaching of inventiveness, while H.R. 362 enables the development and dissemination curriculum tools for teaching inventiveness and innovation. These provisions are derived from my own bill, the

Innovations for our Nation's Vital Educational Needs for Technology (INVENT) Act

. From talking to Silicon Valley CEO's, I have learned that in especially innovative high tech companies, the cutting edge work has really been driven by a few highly innovative scientists and engineers, who tend to have many patents while other employees have only a few. To maximize our nation's knowledge-based resources, I believe we need to figure out how these people "do it" and teach others those skills. I am glad that the first bills we are considering as part of the Innovation Agenda will address this critical need by allowing the NSF to fund grants

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to help us learn how we innovate and how we can best teach inventiveness, and to develop the tools for teaching innovation and inventiveness.